

ABSTRACT

A cross sectional study to correlate the duration of diabetes , glycemic control, autonomic neuropathy and dermatological manifestations in type 2 diabetes mellitus .

Introduction: Diabetes mellitus is the most common non communicable disease (NCD) worldwide. Diabetes has emerged as a major public health problem in our country. A causal association between duration of diabetes mellitus, glycemic control and the development and progression of complications is well established in many studies. By virtue of microvascular involvement, any system can be affected, the skin is also affected in DM in various ways and autonomic nervous system involvement of skin is an unearthed treasure. Chronicity of diabetes plays a big role in cutaneous manifestations. A good glycemic control definitely reduces the incidence and severity of cutaneous disorders. **Aim & Objectives:** To study the pattern of dermatological manifestations in patients with type 2 diabetes mellitus. To correlate the duration of diabetes mellitus, the glycemic control, the autonomic neuropathy with dermatological manifestations and HbA1c with lipid profile. To analyze the observed demographic profile of study subjects. **Materials and methods:** This study was conducted in Tirunelveli Medical College Hospital. Institutional ethical committee clearance and informed written consent from the subjects were obtained. Type 2 diabetes mellitus subjects in the age group between 30-70 years of both genders were randomly selected. Type 1 diabetics, drug

induced diabetes and gestational diabetes subjects, those who were on medications which can induce neuropathy, subjects with co morbidities– Thyroid disorders, Epilepsy, Bronchial Asthma and Tuberculosis and alcoholics and Hansen's disease were excluded. History regarding demographic profile, duration of diabetes, treatment particulars, personal and family history of DM and any other ailments were obtained. Anthropometric measurements height in cm, weight in kg was recorded and body mass index was calculated. Pulse rate was counted. Blood pressure was recorded. Detailed dermatological examination was done. Venous blood was collected and tested for HbA1C, fasting blood glucose, post prandial blood glucose, blood urea, serum creatinine, and lipid profile at Central laboratory, Tirunelveli Medical College Hospital. Subjects were tested for Sympathetic skin response. Results obtained were tabulated and statistically analyzed and correlated by using SPSS software version 20. **Results:** Skin infections were the commonest among cutaneous manifestations in DM. Poor glycemic control was observed among most of the severe infections. Positive correlation was noted between duration of DM and the severity of skin complications. SSR was absent in majority of the subjects with xerosis (dry skin) that reflects the autonomic neuropathy due to defective sudomotor function. As documented in previous studies this study also showed positive association with duration of DM and glycemic control with DM complications in skin. Statistically significant correlation existed between HbA1c

and lipid profile. Demographic profile showed average age in our study subjects was 56.02 years, females outnumbered males, Urban: Rural ratio was 1.08:1. Smokers were 25%. Positive family history was obtained from 44% of subjects and BMI was high in 54% of subjects. **Conclusion:** Diabetes mellitus, a global epidemic, with its complications forming a major contributor for morbidity and mortality needs to be diagnosed early and treated efficiently. Awareness regarding DM among rural population is need of this hour. Since skin is a mirror of internal diseases the cutaneous manifestations can act as a clue to pick up the diagnosis and the complications of DM early. If diagnosed early and treated appropriately with good glycemic control the complications of DM can be delayed. Routine skin examination and SSR test can be considered in high risk and diagnosed diabetic subjects. Health education to contribute to good health for everyone, such as exercising regularly, eating healthily, avoiding smoking, and controlling blood pressure and lipids are essential.

Key words: Diabetes mellitus, duration of DM, Glycemic control, skin manifestations, autonomic neuropathy, SSR.